ECONOMICS 200
BASIC ECONOMIC ISSUES

Dec. 22 2010
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Topics To be Covered

- How Economists Think
- The Division of Labor
- Supply and Demand
- Price Floor and Price Ceiling
- Elasticity
- The Labor Market and Wages
- Financial Markets and Rates of Return
- Personal Investing
Unit 6: The Labor Market and Wages

- Circular flow diagram
Unit 5: The Labor Market and Wages

- Economy as the patterns of workers who carry out the production
- What is consumed vs. what is produced
- Households as the supplier; firms as demander
- Wage = price
- Apply the same supply and demand framework to analyze
Supply and Demand in Labor Market

(a) The Market for Apples

Price of Apples

Supply

Demand

P

Q

Quantity of Apples

(b) The Market for Apple Pickers

Wage of Apple Pickers

Supply

Demand

W

L

Quantity of Apple Pickers
Demand of Labor

- **Definition**: Relationship between quantity of work (hours) desired by the employer and the wage/salary
Shifts in Demand for Labor

- Not Wage!
- New technology
  - Worry of diminishing demand of labor
  - Shift in the labor market, higher average wages
- Demand for the output
- Supply of other factors
- Productivity of labor
Supply of Labor

- **Definition**: Relationship between quantity of labor supplied or provided by the workers and the wage
Shifts in Supply and Demand

- Not the wage!
- Changes in population
- Shifts in demographics
- Shifts in social expectation
Equilibrium

- For each specific labor market, wage is determined by where the quantity of labor demanded equals quantity of labor supplied.
- Ex. Market for skilled nurses
  - If low wage -> Demand would increase
Four Main Issues in the Labor Market

- Minimum wage
- Labor unions
- Labor market discrimination
- Who really pays for the employee benefit
Minimum Wage

Minimum Wage ($7.25)

Labor surplus (unemployment)

Labor demand

Quantity of Low-Skilled Labor

Wage

Quantity demanded

Quantity supplied
Minimum Wage

- Price floor -> labor surplus or shortage of employer willing to offer jobs (?)
  - Possible problems:
    - Incorrect assumption (due to market failure)
- What is the cost and benefit?
- First national implementation in US with the Fair Labor Standards Act in 1938
Minimum Wage

- Alternative Policy
  - Skill training program
  - Subsidy – earned income tax credit program
Labor Union

- Each side has strong opinions

- Facts:
  - European countries generally have high union rate:
    - Britain, Italy: ~40%
    - Sweden, Denmark: ~90%
    - US: 13% (33% in 1950)
Labor Union

- Functions:
  - Use threats of strike to keep wage high
  - Improve communication in the workplace
Labor Market Discrimination

- Definition: When equality qualified person is turned down or paid less because of their gender or race.

- Demand for Labor is less because of gender or race.
Several possible sources of the discrimination at workplace:

- Pre-workplace discrimination
- Equally productive workers but one is paid less
- Market reinforcement
- Pink collard getto
Employee Benefit

- Who really pays for employee benefit?
- Wage can be decomposed into:
  1) Take home pay
  2) Benefit (medical plan, retirement benefit, childcare)
- Bottom line:
Labor Market Summary

- Labor and pay for labor it’s about what you can produced, how many other people can produce it and what people are willing to pay for that product. (similar to price determined by value in exchange)
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Unit 7: Financial Markets and Rates of Return

- Focus on the demand side of the financial market – businesses seek to use the capital to invest in plants and equipments

- Interest rate idea is hard to grasp:
  - Interest payments and return on capital are intangible
  - Long Western tradition on treating interest payments as a sin
    - [Quote]
  - Two meanings of Investment:
    - Households invest in bonds, stocks (supply)
    - Firms invest in factories and equipments (demand)
Supply and Demand in Financial Capital Market

- Demand of financial capital: Relationship between the quantity financial capital demanded by the borrowers and the rate of return.
Supply and Demand in Financial Capital Market

- Supply of financial capital from households: Relationship between the quantity of capital (or savings) supplied from households and the rates of return they receive.

- Inelastic to interest rate change.
  - Culture
  - Habits
  - What employer does
Equilibrium in the Financial Capital Market

- Equilibrium rate of return: when quantity of financial capital supplied is equal to the quantity of financial capital demanded

- Different financial capital markets will have different equilibrium rate of return.
  - Who is borrowing: government, large firm
  - What is the history
  - Which type of borrowing: stocks, loans
Rates of Return

- Three factors that affect rate of return:
  - Compensation for expected inflation
    - Nominal interest rate
    - Real interest rate
  - Compensation for level of risk
    - Higher risk pays higher rates of return
  - Compensation for “time value of money”
    - Value in willing to delay the use of money
Present Discounted Value

- Also called present value
- **Definition**: The amount that future payments are worth in the present if they were to be receive immediately
- The PDV of receiving $C$ in $t$ years with compounded Interest rate $i$

\[ PDV = \frac{C}{(1+i)^t} \]
Application of Present Value

- Most heavily used tool in business finance

- Ex: Business consider to pursue the project that costs 2 million dollars. The project will generate 3 million dollars in 5 years. Is the profit 1 million dollars?
  - No.
  - Need to be discounted back to the present value
  - Consider the opportunity cost of investing at the prevailing interest rate
Application of Present Value

- Home Mortgage
  - Total value of the mortgage = present value of the house/purchase price
- Social policies as environmental issues, traffic safety, helping children
  - Buying something now and have later payoff
- Compare costs now and benefits in the future
Firm’s Investment

- A firm can raise financial capital from:
  - Retained earnings
    - Developed firms
  - Borrow from bank loans or issue bonds
    - Bond has a face value, interest rate, time.
  - Equity or corporate stock
    - Riskier, no guarantee on the interest rates
    - Small and young firms
Importance of Firm’s Investments

- Investment and the firms ability to buy new equipments is one of the main contributors to:
  - economic growth
  - expanding productivity
  - expanding the standards of living
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Supply side of the capital market asks:
How to get rich from financial investments?

- Luck?
- Insider Information?
- Compound interest!
Definition: Interest that is paid on both the initial investment and the previous interests.

How much money do I get in a year after saving $X in the bank with interest rate $i$?

General Formula:

$$PDV(1+i)^t = FV$$

Where PDV is what I save today

FV is the money I will receive in $t$ years
Compound Interest

- Compound interest can lead to a very large return on saving over sustained periods of time.
- If sat aside $1,000:

<table>
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<th>Years of saving</th>
<th>5% annual return</th>
<th>10% annual return</th>
<th>15% annual return</th>
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- “The most powerful force in the universe is the compound Interest rate” – Albert Einstein
4 main sets of characteristics of financial investment:

- **Rate of Return**
- **Risk**
  - Express the probability that the actual result differs from the expected result
  - Diversification such as investing in mutual fund
- **Liquidity**
  - How easy it is to sell the investment
- **Tax Status**
Trade-off Return and Risk

- Sleeping scale to judge risk by Malkiel Burton
  
  *A Random Walk Down Wall Street*
Possible Investment Choices

- Bank deposits – semicomatose
- Money market fund – long afternoon naps + sound sleep at night
- Certificates of deposit - sound sleep at night
- Diversified portfolio of corporate bonds – some dreams
- Diversified portfolio of blue chips’ stocks – some tossing and turning and vivid dreams
- Diversified portfolio of risky growth stocks – occasional nightmares
- Real estate – awaking at night
- Commodities such as gold and other precious metals – bouts of insomnias
Housing Value Chart (1987-2008)
Gold Price (2000-2010)
Best Strategy in Investment

- Depends on
  - Stage in life
  - Risk tolerance
- Time horizon
Polonius to Laertes:

“Neither a borrower nor a lender be; For loan oft loses both itself and friend; And borrowing dulls the edge of husbandry”
Difference between Rates of Return and Interest

- When you borrow money and pay an interest rate, the rate of return is the interest rate.
- When you buy a company stock, the rate of return depends on how well the company runs.
- Interest rate is more predetermined than rates of return and rates of return can be referred to all kinds of return on financial capital.
Difference Between Nominal and Real Interest Rate

- Nominal interest rate is the interest rate that you receive before taking inflation into account.
- Real interest rate is the nominal interest rate minus the inflation rate.

Suppose you are receiving a 6% nominal interest rate on your saving and the inflation rate is 3%, what is the real interest rate on your saving?